

## REMARKS

### *Independent claims 1, 7, and 18*

The Examiner rejected independent claims 1, 7, and 18 as being unpatentable over Buchin (U.S. 5,475,420) in view of Homma (U.S. 5,272,538). The Examiner acknowledges that "Buchin is silent with regard to continually monitoring and identifying changes in an actual image area within a total image area and using the identified change to control an electronic shutter." The Examiner cites that Homma as disclosing this feature and argues that it would have been obvious at the time of the invention to modify Buchin's video imaging system with the teachings of Homma in order to continuously update Buchin's main image area.

We submit however that neither patent discloses an apparatus (claims 1 and 18) or a medical instrumentation system (claim 7) comprising image size detection circuitry, ..., for continuously identifying the actual image area within the total image area of the image sensor, and generating a control signal, based on the actual image area determined from a luminance signal component having an average duration proportional to the actual image area, for controlling the electronic shutter, as recited in amended claims 1, 7 and 18.

For example, in certain embodiments, the actual image area is determined by measuring the average duration of a luminance signal from a line scanned across the actual image area. When the scan traverses the actual image area, the luminance signal surpasses a predetermined threshold. The average duration of the luminance signal (at a level above the threshold) is proportional to the size of the actual image area. Therefore, the actual image area may be determined from the average duration of the luminance signal (see Applicants' specification on pages 13 and 14).

Homma, by contrast, determines the actual image area by finding a light measuring area that best approximates the actual image area from a set of light measuring areas with preset sizes. As described in Homma on col. 12, lines 26-59, for each light measuring area, Homma calculates the difference between the luminance measured inside the light measuring area and the luminance measured outside of the light measuring area. Homma compares the difference values

for each light measuring area and chooses the light measuring area that yields the maximum difference value. Homma determines the actual image area from the chosen light measuring area, rather than from a luminance signal component having an average duration proportional to the actual image area. For the foregoing reasons, claims 1, 7, and 18 are patentable.

*Independent claim 13*

The Examiner rejected claim 13 as being unpatentable over Buchin in view of Homma. We also submit that the combination of Homma and Buchin neither discloses nor suggests a method of controlling an electronic shutter that includes continuously identifying,..., the actual image area within a total image area,..., the actual area determined from a luminance signal component having an average duration proportional to the actual image area..., as recited in amended independent claim 13. As discussed above, neither Buchin nor Homma disclose continuously determining an actual image area in this manner.

Each of the claims depending on one of independent claims 1, 7, 13, and 18, are patentable for at least the same reason as the claim on which they depend is patentable. It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Enclosed is A \$1,020.00 check for the Petition for Extension of Time fee and a \$790.00 check for the Request for Continued Examination fee. Please apply any other charges or credits to deposit account 06-1050, referencing Attorney Docket Number 00167-318001.

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Respectfully submitted,

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